Here's What's New...

New Product Releases from
Planar Monolithics Industries, Inc.
January 21, 2019

1.0 PMI Model No. PE2-22-0R52R0-1R5-18-12-SFF, 0.5 to 2.0 GHz Low Noise Amplifier

PMI Model No. PE2-22-0R52R0-1R5-18-12-SFF is a 0.5 to 2.0 GHz Low Noise Amplifier which provides a typical gain of 22 dB while maintaining a maximum gain flatness of ±0.5 dB. The noise figure is 1.5 dB typical and offers a minimum OP1dB of 18 dBm. The unit is supplied with SMA female connectors in our standard PE2 housing.

- Frequency Range: 0.5 to 2.0 GHz
- Gain Flatness: ±0.5 dB Max. - Measured ±0.25 dB Max
- Noise Figure: 1.5 dB Typ. - Measured 1.67 dB
- OP1dB: 18 dBm Min. - Measured +21.2 dBm
- VSWR In/Out: 2.3:1 Max. - Measured 1.5:1/1.1:1
- DC Voltage Supply: +12 to +15 V
- DC Current Draw: 100 mA Max. - Measured 87 mA

PMI Website Link,
https://www.pmi-rf.com/products-details/pe2-22-0r52r0-1r5-18-12-sff
2.0 PMI Model No. PEC-30-0R2520R0-5R0-22-12-SFF, 0.25 to 20.0 GHz Low Noise Amplifier

PMI Model No. PEC-30-0R2520R0-5R0-22-12-SFF is a 0.25 to 20.0 GHz Low Noise Amplifier which provides 26.5 dB of gain typically while maintaining a maximum gain flatness of ±1.5 dB over the operating frequency. The maximum noise figure is 5.5 dB and offers a minimum OP1dB of +22 dBm. The amplifier requires +12 to +15 VDC and the current draw is 400 mA typical. The unit is supplied with SMA female connectors in our standard PE2 housing.

- Frequency Range: 0.25 to 20.0 GHz
- Gain: 26.5 dB Typ.
- Gain Flatness: ±1.5 dB - Measured ±0.695 dB
- Noise Figure: 5.5 dB Max. - Measured 5.0 dB
- OP1dB: 22 dBm Min. - Measured +24.05 dBm
- VSWR In/Out: 1.7:1 Max. - Measured 1.46:1/1.56:1
- DC Voltage Supply: +12 to +15 VDC
- DC Current Draw: 400 mA - Measured 372 mA

PMI Website Link, https://www.pmi-rf.com/product-details/pec-30-0r2520r0-5r0-22-12-sff

3.0 PMI Model No. DD-20-218-5PF-1-N-M, 2.0 to 18.0 GHz Diode Detector

PMI Model No: DD-20-218-5PF-1-N-M is a high speed Diode Detector that operates from 2.0 to 18.0 GHz. This model has a typical VSWR of 3.3:1 and a switching speed of 5 ns. It is supplied with a SMA male connector and a SMA female connector in a housing measuring 0.50" x 0.50" x 0.22".

- Frequency Range: 2.0 to 18.0 GHz
- VSWR In/Out: 3.3:1 Typ. (Measured @ -23 dBm with 27K Ohm Load Impedance) - Measured 3.23:1
- Frequency Flatness: ±1.5 dB Max., ±1.0 dB Typ.
- Switching Speed: 5 ns
- Voltage Sensitivity: 650 mV/mW, 700 mV/mW Typ.
- Tangential Sensitivity: -50 dBm @ 2 MHz Video Bandwidth (With 2 dB Noise Figure Amplifier)
- Video Capacitance: 5.6 pF
- Output Voltage: Negative is Standard (Positive is Available)

PMI Website Link, https://www.pmi-rf.com/products-details/dd-20-218-5pf-1-n-m

4.0 PMI Model No. 4BP160-50-2A-PP, Band Pass Filter
PMI Model No. 4BP160-50-2A-PP band pass filter centered at 160 MHz. The unit has a maximum passband VSWR of 1.5:1 and a typical passband insertion loss of 3 dB. It is supplied with PC pin connectors in a housing that measures 1.20" x 0.31" x 0.31".

- Center Frequency: 160 MHz
- 3 dB Bandwidth: 50 MHz, ±5%
- Passband VSWR: 1.5:1 Max.
- Passband Insertion Loss: 3 dB Typ.
- Rejection: 4 Section Response

**PMI Website Link,**

### 5.0 PMI Model No. APD-2-0518-YR1, 0.5 to 18.0 GHz 2-Way Power Divider

PMI Model No. APD-2-0518-YR1 is a 2-Way Power Divider / Combiner that operates over the frequency range of 0.5 to 18.0 GHz. This model offers low loss of 3.5 dB typical (over 3 dB theoretical) with a VSWR of 1.5:1 typical into a 50 ohm impedance. The average isolation is 20 dB. This model offers a typical amplitude balance of ±0.45 dB and a typical phase balance of ±5 degrees. This model can handle input power levels of up to 25 watts into a load VSWR of 1.2:1 and up to 7.5 watts into a load VSWR of 2.0:1. The housing measures 3.75" x 1.0" x 0.4" and is gold plated.

- Frequency Range: 0.5 to 18.0 GHz
- Insertion Loss:
  - 1.8 dB Typ. (0.5 to 8.0 GHz) - Measured 2.02 dB
  - 3.5 dB Typ. (8.0 to 18.0 GHz) - Measured 3.19 dB
- RF Input Power Handling:
  - 25 W CW into a load VSWR of 1.2:1
  - 7.5 W CW into a load VSWR of 2.0:1
  - 0.75 W CW into a load VSWR of Infinite:1
- Amplitude Balance:
  - ±0.2 dB Typ. (0.5 to 8.0 GHz) - Measured ±0.10 dB
  - ±0.45 dB Typ. (8.0 to 18.0 GHz) - Measured ±0.44 dB
- Phase Balance:
  - ±4º Typ. (0.5 to 8.0 GHz) - Measured ±0.50º
  - ±5º Typ. (8.0 to 18.0 GHz) - Measured ±2.75º
- Isolation:
  - 16.5 dB Typ. (0.5 to 8.0 GHz) - Measured 16.4 dB
  - 21.0 dB Typ. (8.0 to 18.0 GHz) - Measured 17.4 dB
- VSWR:
  - 1.5:1 Typ. (0.5 to 8.0 GHz) - Measured 1.67:1
  - 1.6:1 Typ. (8.0 to 18.0 GHz) - Measured 1.53:1

**PMI Website Link,**
https://www.pmi-rf.com/products-details/apd-2-0518-yr1

### 6.0 PMI Model No. SDLVA-2020-70-0518, 0.5 to 18.0 GHz Successive Detection Log Video Amplifier (SDLVA)
PMI Model No. SDVLA-2020-70-0518 is a Successive Detection Log Video Amplifier (SDLVA) that operates from 0.5 to 18.0 GHz. This model has a VSWR of 3.0:1 and a log slope of 20 mV/dB with a logging range of -65 to +5 dBm. It is supplied with SMA female connectors in a housing measuring 3.00” x 3.50” x 0.50”.

- **Frequency Range:** 0.5 to 18.0 GHz
- **Frequency Flatness:** ±2.0 dB Typ. - Measured ±1.7 dB
- **TSS:** -65 dBm Min. (8.0 to 18.0 GHz) - Measured -67 dBm
- **VSWR:** 3.0:1 (0.5 to 18.0 GHz @ -20 dBm) - Measured 1.9:1
- **Logging Range:** -65 to +5 dBm - Measured >-65 to +5 dBm
- **Log Linearity:** ±1.75 dB (-65 to +5 dBm) Max. - Measured ±1.38 dB
- **Log Slope:** 20 mV/dB (±10% Tolerance) - Measured 20 mV/dB
- **Log Temperature Stability:** ±1.75 dB (0ºC to 60ºC) - Measured ±1.68 dB
- **Rise Time (10% to 90%):** 20 ns Max. - Measured 8.62 ns
- **Recovery Time:** 200 ns Max. (-65 to +5 dBm) - Measured 36.69 ns
- **Output Power:** +10 dBm ± 2.5 dB Typ. - Measured 13.99 dBm
- **Output Video Load:** 100 Ohms ± 10% or as Desired
- **Power Supply:**
  - +15 V @ 600 mA Max. - Measured 490 mA
  - -15 V @ 200 mA Max. - Measured 95 mA

PMI Website Link,
https://www.pmi-rf.com/products-details/sdlva-2020-70-0518

### 7.0 PMI Model No. P6T-0R5G18G-60-R-SFF, 0.5 to 18.0 GHz SP6T Reflective Switch

PMI Model No. P6T-0R5G18G-60-R-SFF is a high speed, single pole, six throw, reflective switch that operates from 0.5 to 18.0 GHz. This model has a minimum isolation of 60 dB and a maximum insertion loss of 3.5 dB. This unit has a maximum switching speed of 100 ns and a maximum VSWR of 2.0:1. It is supplied with SMA female connectors in a housing measuring 3.0” x 1.5” x 0.4”.

- **Frequency Range:** 0.5 to 18.0 GHz
- **Isolation:** 60 dB Min. - Measured 77 dB
- **Insertion Loss:** 3.5 dB Max. - Measured 3.3 dB
- **VSWR In/Out:** 2.0:1 Max. - Measured 1.9:1
- **Operating Input Power:** +20 dBm CW
- **Switching Speed:** 100 ns Max. - Measured <20 ns
- **DC Voltage and Current:**
  - +5 V @ 300 mA - Measured 35 mA
  - -5 V @ 100 mA - Measured 11 mA
- **Control Signal:**
  - TTL Logic: "0" = On
  - TTL Logic: "1" = Off

PMI Website Link,
https://www.pmi-rf.com/products-details/p6t-0r5g18g-60-r-sff

### 8.0 PMI Model No. P9T-500M40G-60-R-55-292FF-OPT1222, 0.5 to 18.0 GHz
SP9T Reflective Switch

PMI Model No. P9T-500M40G-60-R-55-292FF-OPT1222 is a high speed, single pole, nine throw, reflective switch designed to operate between 0.5 to 18.0 GHz. This switch offers a maximum insertion loss of 6.5 dB and provides minimum isolation of 60 dB. The typical switching speed is 100 ns and the maximum VSWR is 2.0:1. This model is supplied with 2.92 mm female connectors in a housing that measures 4.5" x 1.5" x 0.4".

- Frequency Range: 0.5 to 18.0 GHz (Optimized for 12.0 to 22.0 GHz)
- Isolation: 60 dB Min. - Measured 74.99 dB
- Insertion Loss: 6.5 dB Max. - Measured 3.69 dB
- VSWR In/Out: 2.0:1 Max. - Measured 1.95:1
- Operating Input Power: +20 dBm CW - Measured +20 dBm CW
- Switching Speed: 100 ns Typ. - Measured 65 ns Typ.
- DC Voltage and Current:
  - +5 V @ 450 mA Max. - Measured 111 mA
  - -5 V @ 75 mA Max. - Measured 14 mA
- Control Signal: 4-Line Decoded TTL

PMI Website Link,
https://www.pmi-rf.com/products-details/p9t-500m40g-60-r-55-292ff-opt1222

9.0 PMI Model No. SFB-6G18G-2CH-6DB-500NS-SFF, 6.0 to 18.0 GHz 2 Channel Switched Filter Bank

PMI Model No. SFB-6G18G-2CH-6DB-500NS-SFF is a 6.0 to 18.0 GHz Band Pass Filter with two channels at 6.0 to 10.4 GHz and 10.4 to 18.0 GHz. Both channels have an insertion loss of 6 dB, a maximum VSWR of 2.0:1, and a minimum isolation of 60 dBc. The maximum switching speed is 500 ns and the video leakage is less than 100 mV. This model is supplied with SMA female connectors in a housing measuring 3.00" x 0.75" x 2.00".

- Frequency CH1: 6.0 to 10.4 GHz
- Frequency CH2: 10.4 to 18.0 GHz
- Insertion Loss CH1 & CH2: 6 dB
- Input VSWR CH1 & CH2: 2.0:1 Max. - Measured 1.8:1
- Output VSWR CH1 & CH2: 2.0:1 Max. - Measured 1.72:1
- Isolation: 60 dBc Min. - Measured >60 dBc
- FC Rejection: 50 dBc @ 12.0 to 18.0 GHz - Measured 62.9 dBc
- Switching Speed: 500 ns - Measured 109 ns
- Video Leakage: <100 mV - Measured <5 mV
- Power Supply:
  - +5 VDC @ 100 mA Max. - Measured 67 mA
  - -15 VDC @ 50 mA Max. - Measured 45 mA

PMI Website Link,
https://www.pmi-rf.com/products-details/sfb-6g18g-2ch-6db-500ns-sff

10.0 PMI Model No. TD-30T-218-FC-HS Option 220, 2.0 to 20.0 GHz Threshold
Detector

PMI Model No. TD-30T-218-FC-HS Option 220 is a high speed threshold detector designed to operate from 2.0 to 20.0 GHz. It has an external adjustment to vary the threshold level from -10 to -20 dBm, with an typical input flatness of ±1.0 dB, and a maximum VSWR of 3.0:1. This model is supplied with SMA female connectors in a housing measuring 0.80" x 0.62" x 0.40".

- Frequency Range: 2.0 to 20.0 GHz
- VSWR: 3.0:1 Max. - Measured 2.64:1
- Dynamic Range: -20 to -10 dBm
- Input Flatness: ±2.0 dB Max., ±1.0 dB Typ.
- Response Time: 100 ns Max., 50 ns Typ.
- Output: TTL
- Power Supply: +12 V @ 100 mA Max. - Measured 35 mA

PMI Website Link,

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*** For more information on PMI's complete line of products, please visit ***
http://www.pmi-rf.com

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PMI offers just about any RF/Microwave component, module, or sub-system for both industrial and military based requirements. Please click on the product types below to be directed to our web site catalog. Components and modules can be modified to meet your exact requirement.
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Switch Matrices

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Receiver Front Ends

SMT and QFN Packaging
We truly value your interest in our company and our products. We appreciate your feedback. Please feel free to contact us with any requirements or questions that you may have.

Sincerely,

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